### Module title
Overview Linear Algebra and Number Theory for Teaching Degree (German Gymnasium)

### Abbreviation
10-M-LNL-Ü-152-m01

### Module coordinator
Dean of Studies Mathematik (Mathematics)

### Module offered by
Institute of Mathematics

### ECTS
10

### Duration
1 semester

### Contents
Basic notions and structures; vector spaces, linear maps and systems of linear equations; theory of matrices and determinants; eigenvalue theory; bilinear forms and Euclidean/unitary vector spaces; diagonalisability and Jordan normal form.

### Intended learning outcomes
The student knows and masters the essential methods and proof techniques of linear algebra and is able to apply them independently. He/She has an overview over the fundamental notions and methods of linear algebra, knows about their algebraic and geometric background, is able to relate them to each other and can present them adequately in written and oral form.

### Courses
V (6) + Ü (2)

### Method of assessment
oral examination of one candidate each (20 to 40 minutes)
Assessment will have reference to the contents of modules 10-M-LNL1 and 10-M-LNL2.
Language of assessment: German and/or English

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)
§ 73 I Nr. 2

### Module appears in
First state examination for the teaching degree Gymnasium Mathematics (2015)